

Volume 18 No. 1

January, 1967

FLYING FARMERS ADOPT APT PROGRAM

(Annual Proficiency Test)

The APT program adopted by the International Flying Farmers is a program requiring all pilots taking part (including ladies land-it) to take a proficiency check ride with a qualified flight instructor each year.

The program will be conducted as follows:

1. An APT Guide Book was printed and will be distributed to the Secretary of each Chapter by the International Office.
2. Each Chapter President appoints an upgrading committee for his state and encourages the program by use of the APT Guide Book.
3. The APT certificate will be returned to the International Office.
4. Recognition will be given to those pilots with an APT seal on their convention lapel badge and a gold bar for their Flying Farmer pin.

Quotes from the APT Guide Book:

"You are a Flying Farmer member and belong to one of the greatest international organizations which believes that better world understanding among people may be achieved through agriculture, aviation, and communication.

Aviation regulations require that our airplane be tested annually, and also, your physical condition be

checked annually or biannually, dependent upon your type of certificate.

Regulations require that you be qualified and current in the type, class, and category of the airplane you fly.

No requirements or regulations specify that you be tested or checked annually; however, the upgrading committee has prepared Project APT for you so that you may become a better and safer pilot and your passengers will more enjoy flying with you.

1. The APT Program is not a test or flight check, you cannot fail this program.
2. The APT Program is not required.
3. The APT Program is self-voluntary and designed to increase your knowledge and skill proficiency so as to help you better recognize your flight limitations.

The APT Program was prepared for you by the International Flying Farmers Upgrading Committee with the cooperation of Oklahoma State University and Don Flower and Associates Insurance."

M. A. C. heartedly congratulates the International Flying Farmers in the adoption of their APT program. It is undoubtedly a highly worthwhile program and a "big" step towards pilot self improvement.

MONTANA'S FIFTH FLIGHT INSTRUCTOR REFRESHER COURSE TO BE HELD

The fifth Flight Instructor Refresher Course, sponsored by the Montana Aeronautics Commission will be held in Great Falls, March 20 through March 27, 1967.

All Montana General Aviation Operators and Flight Instructors will be receiving information and application forms in the mail within the next few weeks.

PARDON OUR BOO BOO

In the December issue of the newsletter in the FAA Inspectors Corner we inadvertently left out a few words which has caused some confusion. We are hereby apologizing to Mr. Mills and to you. Following is the correct paragraph. "One engine manufacturer of a popular light aircraft fuel injection engine has a high and low fuel boost position. The aircraft owner's handbook clearly states use of "low boost" for start and "no boost" for take off. "High boost" for takeoff is specifically prohibited. But several accidents have resulted when pilots disregarded this warning and used high boost for takeoff. The high boost is for a hot weather "vapor lock" condition." SORRY!

Official Monthly Publication
of the
**MONTANA AERONAUTICS
COMMISSION**

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Helena, Montana 59601

Tim Babcock, Governor

Charles A. Lynch, Director

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Letters to the Director

Dear Sir:

Ever since this past summer when your organization conducted the tremendous search for Neal and Luther Gardner when their plane crashed, I have wished I might personally thank everyone who had a part in that service to our families. Since I do not know names and addresses, I will express to you our sincere gratitude. We have been overwhelmed by the magnitude of the time, expense and effort, expended.

At this season of Christmas and the closing of the year, I felt the need to make an expression of our appreciation. I am enclosing the little verse I have written. May it bring joy to you and those who serve under you to know that you have given "unto the least of these," and that we appreciate what was done for us. May God's blessings go with you on your future flights.

Sincerely,
Editha Gardner
(Mrs. S. Neal Gardner)

"Thank you for being our very good friends to come bringing us your love and consolation."

—A Tribute To Those Who Helped Us
When Neal Was Killed—

CHRISTMAS IN JUNE

Christmas in June?

Thought echoes, "No. Too soon! Too soon."

Not when birds songs fill the air,

And summer flowers bloom everywhere,

When barefoot children romp and play,
And farmers work the new mown hay.
No! No! Not Christmas now.
When summer fruit bends every bough."

But my heart answers with good reason,
"Love, peace, good will care not for season."

For when sorrow turned our day to night,
As nature's tempest stopped life in flight.

Christ's message entered the hearts of men.

June? But I felt Christmas then.

Friends sent messages of love and cheer.

Help came from people far and near.
Strange pilots, from states far away,
Took planes in search day after day.
News media flashed the message out,
Kindness, friendship, love, reigned about.

"June? Not Christmas then," you say.
"Yes," my heart answers, as I kneel to pray.

Now busy shoppers with rushing feet,
Seek gifts in shops along the street.
And Christmas carols echo around.
But my heart is tuned to a different sound.

From down the ages His voice rings clear.
Christ's words from far away I hear.
"As ye have done it unto the least of these."

"Walk the second mile, a burden to ease."

Friends went thousands of miles and came again,
To give of themselves to ease my pain.
June? Yes, Christ's message rang loud and clear.

Christmas can be all through the year.

At this time we are again sharing our annual letter from Joe Lavallee, former Glasgow flight instructor and well-known Montana pilot who is presently instructing for the Ethiopian Airlines in Africa.

Dear Mr. Lynch:

Greetings from Africa.

Well, old 1966 has almost had it, so I guess it's time for a report from your expatriate flight instructor.

We're well into the cross country phase of our third class. We keep

those Cubs in the air about 8 hours a day. In about one week, we start night flying—10 hours for each student in Cubs. We have 8 students. Towards the last of the month we go into the Cessna 180 for instrument training—70 hours per student. In March, we give each student 15 hours in a Beech 18. They get DC-3 training from the line pilots, then we start all over again. In June, I take my vacation and have a nice rare steak at 5:00 A.M.—Allie's Supper Club.



Joseph Lavallee

I appreciate receiving the Commission publication, "Montana and the Sky." I am still very much interested in Montana aviation, and it just occurred to me that it's certificate registration time. So here is my Ethiopian dollar to register my Ethiopian ATR No. AA-46.

We are right in the middle of the dry season and talk about a Big Sky, absolutely cloudless. It's surprisingly cool being so near the equator. The temperature dips to the low 50's at night and in the afternoon it goes roaring up to the mid 80's. Do I miss the Montana winter? You bet I do! I dearly loved to look out the terminal windows at Glasgow and watch John Poling plow the runways.

Seasons greetings to all.

Joe Lavallee
Addis Ababa, Ethiopia
Africa

FOR SALE: Cessna 175, zero time on rebuilt engine. Take over present contract. Call State Credit Corporation. Phone: 543-8373—Missoula.

FOR SALE: Cessna 120—635 SMOH—Fresh Annual—Electric system. VHF Radio. Price \$2500. Contact: J. M. Milligan, Rte. 1, Box 9, Helena. Phone: 442-8148.

NATA—HOLDS HIGHLY SUCCESSFUL CONVENTION

The National Aviation Trades Association held a highly successful and well attended convention in Las Vegas, Nevada—November 29-December 1. A few of the many "highlights" of the convention which was combined with the National Air Taxi Conference follows:

NEW BOARD MEMBERS

George S. Hoster, Jr., President of Aircraft Acceptance Corp., Columbus, Ohio, was elected chairman of the board.

W. E. Congdon, Southern Airways Co., Atlanta, Ga., treasurer.

Newly elected as directors were Charles Lynch, W. R. Cutter, J. J. Eggspuehler, Richard Reade, Howard Gregory, Robert Hudgens, Ralph Nelson, J. Patrick Murphy, L. L. Clinton, and Harry Archer.

AWARDS

George Crockett, president of Alamo Airways, Las Vegas, Nevada, received the Charles Parker award for his dedicated service which has resulted in new achievements for the association.

Dr. Karl Frudenfield was presented the NATA award. He is the inventor of the Turn Coordinator, a replacement for the traditional turn and bank instrument for aircraft. He also was instrumental in perfecting the Britain autopilot system, the basic element of which is installed by many general aviation manufacturers to prevent inadvertent loss of lateral stability.

Cessna Aircraft Co. received a meritorious achievement award for its leadership, marketing program, and dedication to aviation progress throughout the free world.

A meritorious service award was presented to J. J. Eggspuehler, Ohio State Univ., and Ralph Nelson, AOPA Foundation, for outstanding contributions to flight education and betterment of general aviation.

NEW ASSOCIATIONS FORMED

National Aerial Applicators Assn. was formed to represent the interests of the growing agricultural application industry.

The National Association of Flight Instructors was organized to upgrade and professionalize flight instruction. The organization grew out of a recent instructors recertification course held

in Las Vegas (the course sponsored jointly by the NATA, The AOPA Foundation, Inc., Link Foundation, Ohio State Univ., Nevada Southern Univ., and the Federal Aviation Agency.

DISPLAYS

More than 60 excellent exhibits were provided by leading manufacturers and suppliers daily.

SPEAKERS

It was the general consensus that all of the meetings were well planned and informative and that all talks were superior.

Mr. Charles Spence of the Utility Airplane Council, Aerospace Industries Association gave an excellent talk on "A Look to the Future." Mr. Spence accented the tremendous growth of aviation—accenting the importance of the Fixed Base Operator, usually the final contact with the aviation customer. He commented that not only did the FBO have to face the challenge to accommodate this growth but also to accelerate it.

Mr. George Haddaway, publisher of Flight Magazine addressed the banquet climaxing the convention. Mr. Haddaway noting the 1500 at the '67 meeting, recalled the days when 100 registrations at an NATA convention "was earthshaking." Urging the group to work together for the good of the industry. He stated that "We are getting an FBO operation this nation has needed."

FEDERAL AVIATION AGENCY ITINERARY LISTING



Airport	Feb.	Mar.
Culbertson	8	8
Glasgow		22
Glendive	9	9
Great Falls		
Lewistown	23	
Miles City	16	23
Missoula		23
Sidney		
Note: Provisions have been made to give Private, Commercial/airplane and Flight Instructor/airplane and Instrument written examinations ON AN APPOINTMENT BASIS ONLY at the following FAA Flight Service Stations.		
Bozeman		Lewistown
Butte		Livingston
Cut Bank		Miles City
Dillon		Missoula

In place of the usual "Keep off the grass" notice, a sign on a lawn at the Lockheed Air Terminal reads, "Crossing this area maintain altitude of one foot."

AVIATION EDUCATION HIGHLIGHTS



By C. R. "Ron" Adams
Supervisor of Aviation Education

Since assuming my duties as Supervisor of Aviation Education last June, it has been my pleasure to occasionally write an article for the newsletter, however, commencing with this issue it will be my pleasure to submit a monthly column under the heading of "Aviation Education Highlights." The new column will give me the opportunity to visit with each of you on the various aspects of aviation education.

All of you who read this I am sure would not need much convincing as to the value of an aviation science course in your high school. In today's Air Age, the aviation industry is the largest non-agrarian industry in the world, yet this is an area that is woefully neglected in our education programs. This is not only true in Montana, but nation wide.

There are many reasons for this, some valid, some not. One, which is most valid, is that our institutions of higher learning where the teachers are trained, do not offer training in this subject area. This is due primarily to the lack of demand for training of teachers in this area. The demand in this subject area is now building, but the demand is not being met.

This is not the case in our neighboring state, Washington. Central Washington State College in Ellensburg has announced the creation of a position for a full-time aerospace education instructor. In the past, Central Washington has utilized parttime faculty and part-time assignments in this subject area. In recent years, the demand for training in this field of education has prompted Central Washington State College to create a position for a full-time aerospace and aviation education instructor. They are looking for a person that has a thorough knowledge of both (1) the public elementary and secondary school curriculums and programs, and (2) aviation, including flight and ground

school instruction. The following qualifications are desirable:

1. Have been educated as a teacher and have had teaching experience in public elementary and/or secondary schools.

2. Have at least a Master's degree, preferably a doctorate, or be close to it.

3. Be an active pilot with commercial and flight instructor ratings.

4. Have an Advance Ground Instructor rating.

5. Have a highly successful record in instructing.

You can see from the qualifications that they are looking for a highly qualified individual. This is as it should be. Aviation education should be on an equal basis with any other subject area of education.

If you are interested in obtaining further information, you may direct your inquiry to: J. Wesley Crum, Dean of Education, Central Washington State College, Ellensburg, Washington 98926.

I hope this is the beginning of a trend. The demand is building in Montana. To date we have six high schools teaching a course in aviation science. Three more high schools are contemplating such a course for the 1967-1968 school year.

We are meeting this current demand through our workshops, conducted each summer at various units of the University System. However, a formal course of instruction during the undergraduate years of college would be the ideal method of teacher preparation. If the demand for this course in our high schools continues, our workshops cannot meet the requirement. This would necessitate establishing a curriculum similar to Central Washington's.

In the next issue I will discuss this aspect of aviation education further, and some of the programs we have going at the present time.



TOWER OPERATIONS

DECEMBER, 1966

	Total Operations	Instrument Operations
Billings	9,145	1,318
Great Falls	8,493	690
Missoula	4,771	414
Helena	3,031	199

HAVE YOU READ

"WHO ME FLY?" This new pocket-sized book by Robert Scharff describing the advantages of private flying will appear on newsstands throughout the country this month. The 141 page report is aimed at the non-flying public and explains what it takes to learn to fly, the costs involved and how people can broaden their lives with a private pilots license.

The forward written by TV entertainer/musician, Skitch Henderson states, "Flying is a blend of the Sublime and the practical. It broadens your personal horizons. It gives you new things to do—new places to go—new people to meet. The sky is my greatest inspiration, my escape and my way of life. I only hope that others may share it."



Look for this cover on your newsstands.

"Who Me Fly" within its covers gives an amazing wealth of information, including suggestions to obtaining your flight instruction; costs; advantages of aircraft rental and/or ownership; insurance and even includes aerial photography tips. To whet the travelers appetite, Mr. Scharff includes a chapter of an aerial sightseeing tour from coast to coast of the United States and suggests out-of-the-country trips such as Canada, Alaska, Mexico, the Bahamas and Hawaii.

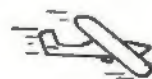
Each book contains six \$5.00 introductory flight lesson coupons from

your local Cessna dealer as a special bonus for readers who would like to follow up with a first flight lesson.

Mr. Scharff concludes his book with a glossary of often used aviation terms. The terms are brief, easy-to-understand-explanations of Sky Talk.

"Who Me Fly" should be informative and fun reading for anyone interested in aviation, pilot or prospective pilot but should also be thoroughly enjoyed by non-fliers especially if members of their family or business acquaintances and friends fly.

Price of the book is 60 cents. If the book is not available in your area you may obtain copies by ordering directly from Tower Publications, Inc., 185 Madison Avenue, New York, N.Y. 10016. (Please include 5 cents postage for orders under three books.) The book can also be obtained from most Cessna dealers or Cessna's Public Relations Department, Wichita, Kansas. 67201.



CALENDAR

January 10-11, Havre—Montana Aviation Trades Association Convention.

January 12, Helena—Montana Aeronautics Commission Monthly Meeting.

January 15-18, Palm Springs, Calif.—15th Annual meeting of the Helicopter Association of America and Helicopter Showcase. For reservations write: Holiday Inn-Riviera, 1600 North Indian Ave., Palm Springs, Calif.

February 8, Helena—Montana Aeronautics Commission Monthly Meeting.

April 14, Missoula—Montana Airport Management Association annual meeting. Held at the Florence Hotel.

May 6-7, Havre—Montana Pilots Association Convention.

May 6-7, Bakersfield, Calif.—International Championship Stock Plane Air Races will be held at Shafter Airport (Minter Field).

May 20-24, 1967, Louisville, Kentucky—40th Annual Business meeting and conference, American Association of Airport Executives. Headquarters: Hotel Kentucky.

STATE DIRECTORS CONFERENCE

James Monger, Assistant Director of the Montana Aeronautics Commission represented Charles Lynch, Director, at the State Directors/Federal Aviation Agency Conference held in Kansas City, Missouri, on December 6 and 7, 1966. The conference was conducted by Mr. Edward C. Marsh, Director of the FAA's Central Regional Headquarters office.

FLIGHT STANDARDS DIVISION—Mr. K. W. Gordon, Aircraft Management Branch Chief, Chairman for the Flight Standards Division agenda, introduced Mr. Robert O'Neil, Office of General Aviation Affairs in Washington. Mr. O'Neil directed his presentation primarily towards the aviation education programs and emphasized that the states should consider themselves the main promotional body concerned with the educational programs but that his office was always available for assistance. New aerospace and aviation education material was introduced to the group and hand-out material was available.

Mr. William R. Ost discussed some of the safety programs that the Flight Standards Division has in progress. He particularly emphasized "This is your Life," a private pilot counseling program. During the course of Mr. Ost's presentation he stated that in several geographical areas, showing a high accident rate, one or two offices showed a substantial drop in accident rate. He noted that this was particularly true in Montana's District No. 9. He further commented on Supervising Inspector for GADO 9, Mr. Lee Mills' audiovisual slide program and that Lee's program had been adopted by the Region and will be disseminated on a regional basis.

THIRD LEVEL CARRIER GROWTH AND ITS FUTURE—was discussed by Mr. Walter Delear. A series of graphs showing increase of aircraft were displayed for National Air Taxi, Central Region Air Taxi and Central Region IFR Air Taxi. An open discussion period followed the presentation.

U.S. STANDARD FOR TERMINAL INSTRUMENT PROCEDURES (TERP'S)—Mr. Jeffers commented that authority to approve instrument approach has been given to the Area Managers and therefore time can be saved by going direct to them with all requests.

"THE AREA CONCEPT AND ITS



(Seated lt to rt.) Winter, Indiana; Jordan, Wisconsin; Marsh, FAA Central Region Office; McCabe, Minnesota; and Wenzel, Illinois. (Standing lt. to rt.) Gale, FAA Central Region; Brown, FAA Minneapolis; Brannon, FAA Chicago; Kreuscher, Nebraska; Stewart, Kansas; Vavra, North Dakota; Monger, Montana; Ownes, Missouri; Hanson, South Dakota; Ramsey, Michigan and Barrow, FAA Central Region.

EFFECT ON STATE DIRECTORS—Panel Moderator was Mr. James Ramsey. Mr. Ramsey stated that the Directors appreciated the opportunity to present their problems to the FAA. He noted improvement in the program under the Area Concept. A number of the Directors made presentations on this subject followed by a group discussion. It was the consensus that the Area plan was an improvement and a few of the remaining problems were discussed. Mr. Edward Marsh, Mr. Lyle Brown, Area Manager of Minneapolis, and Mr. Robert Gale, Area Manager, Kansas City were the spokesmen for the three Area offices.

AIR TRAFFIC—Mr. R. O. Ziegler, Chief of the Air Traffic Division spoke to the group on the explosive growth in Air Traffic and also indicated that it will continue.

Mr. Ziegler introduced Mr. E. F. Balachowski who spoke on this explosive growth in detail, giving the "Trends in General Aviation Activities." Mr. Balachowski comparing the Central Region totals with the percentage of the U.S. totals showed the region as having 25 percent of the airports and airplanes and almost 25 percent of the pilots. We exceeded the national average for general aviation increases during the past year. He continued to state that some of the factors closely related to the greater utilization of aircraft were installation of TVORS, H facilities, Fan Markers and non-federal NAVAIDS.

TASK FORCE REPORT—was pre-

sented by Mr. Fritz Wolf of Wisconsin. Mr. Wolf reported on the committee of representatives of the State Directors of which he is the Chairman. The group was appointed to set up guidelines for the establishment of Minimum Standards for small and medium size airports. The six man Committee completed a draft proposed to be called "Minimum Standards—Preparation Guide for Airport Aeronautical Services. This will be in the final draft form in January of 1967.

AIRPORTS—Mr. W. C. Knoepfle, FAA—provided the background information on the FY-67 FAAP. A considerable amount of discussion ensued on FAAP.

Surplus property was covered by Mr. W. V. Butcher with the various states directors giving their reports on improvements and problems of the programs.

Various other phases of airport installations, traffic counters, and the problem of noise abatement was covered by Mr. J. Waedekin and Mr. B. Howard.

It was felt the meeting was highly beneficial to the attending representatives.

Scientists estimate that more than a million tons of "cosmic dust" come to rest on the earth's surface each year. Microscopic grains of debris from space conceivably can be a part of every sedimentary rock formed on earth and of every vacuum cleaner's sweepings.

AIRPORT NOTES



By James H. Monger,
Assistant Director,
Airports

Anaconda Drag Strip. Pilots are advised that the Butte Timing Association has constructed a blacktop automotive drag strip $1\frac{1}{2}$ miles west of the Anaconda airport. The Montana Aeronautics Commission is extremely pleased to learn that drag strip enthusiasts and timing associations are providing their own facilities, and conforming with the State regulation which prohibits vehicular traffic on airports. Pilots are asked to be alert and not confuse the Anaconda airport with the drag strip due to the fact the pilot landing on the drag strip would probably receive the same treatment as that of a dragster being caught on an airport. It is hoped that the splendid cooperation witnessed in Silver Bow and Deer Lodge Counties, will spread throughout the State and that many other locations will provide blacktop drag strips specifically for that purpose.

Choteau. The Choteau Airport Commission is now in the process of advertising for bids for the construction of a paved runway. The airport improvement project will consist of lighting and paving an apron, a taxiway and the Northeast/Southwest runway 60 feet wide by 3,800 feet in length. Interested contractors can obtain plans and specifications from Wenzel Engineering in Great Falls.

Airport Directory. The Airport Division has submitted the 1967 Montana Airport Directory to the printer, and the publication should be available to all registered pilots in February. This year, we will again mail out insert packets that will replace the contents of the last Directory. You will again use the same cover. This year, we are not publishing any privately owned airports except in the case where that particular airport serves an adjacent community as its only airport.

Hospital Heliports. The announcement of the Montana Hospital Heliport Program by the Montana Aeronautics Commission has created an immediate influx of applications from hospitals throughout the State. The Airport Division will make site investigations and reports on each location. It is hoped that the present group can be completed during the 1967 summer months. Several locations have physical restrictions which will not allow for a development, but generally most of the hospitals applying will be able to have an adequate heliport. The applicants to date are Kalispell General Hospital; St. Johns Hospital—Helena; State Prison—Deer Lodge; Soldiers' Hospital—Columbia Falls; Vocational School—Helena; Childrens' Home—Twin Bridges; Industrial School—Miles City; Pulmonary Hospital—Galen; Missoula Community Hospital; Great Falls Deaconess Hospital; and Columbus Hospital—Great Falls.

F. A. A. Announces 1967 Program. Eight Montana Airports will receive a Federal grant for the airport improvement program for Fiscal Year 1967. The total grant for Montana is \$631,250. This constitutes 53.03% of the project cost, and the local sponsor must match this money with the remaining 46.97% of the total project cost. In most cases, the local airport board, the sponsor, will borrow their matching funds from the Montana Aeronautics Commission on a ten-year, non-interest loan.

Allocations of \$72.5 million in Federal matching funds to help local communities construct and improve 341 civil airports in the nation were announced on December 18th by the Federal Aviation Agency.

The 1967 Program provides \$9.2 million to improve 295 existing airports, and \$13.3 million to construct 46 new airports in the nation. Emphasis was placed on the airport development to relieve traffic congestion at major air terminals and to provide runways needed by communities to accommodate jets and other modern aircraft now being used by air carriers.

Public acceptance of air transportation and need for airport development produces an unprecedented number of requests for Federal aid. 731 requests were submitted to Washington, D.C., these requests totalled \$274.1 million for the Federal share. Because

of the amount requested, the F. A. A. had to limit the program to the urgently needed development where local financing would permit early commencement of work. Many requests involving necessary work had to be deferred for future consideration. The National allocation was based on the use of \$61 million of the \$71 million appropriated by Congress for this 1967 Fiscal Year, and \$11.5 million carried over from previous years. \$10 million was held back. The Montana allocations are as follows: Billings—Logan Field, \$72,735: Purchase land, construct taxiway and holding apron, light parallel taxiway, and fencing. Circle—City/County Airport Board: \$30,020: Construct and mark paved runway 3,000 feet by 50 feet, construct taxiway, apron and access road. Conrad—\$27,432: Resurface and mark paved runway 3,600 feet by 75 feet. Glasgow—Glasgow International, \$116,529: Extend, mark and light runway 12/30 from 5,000 feet to 6,000 feet, overlay taxiway, construct entrance road, and fencing. Great Falls—Great Falls International, \$22,006: Construct taxiway, expand apron, runway and taxiway lighting. Sidney—Sidney-Richland Municipal Airport, \$225,705: Purchase land, construct, mark and light new runway 5,700 feet by 100 feet, taxiway overlay and construct new apron and fencing. West Yellowstone—Yellowstone Airport, \$38,670: Construct apron 250 feet by 500 feet. Wolf Point—\$98,153: Purchase land, resurface runway and extend from 4,000 feet to 5,100 feet by 100 feet wide, construct taxiway and apron and light runway.

Other Federal aid airport work will be considered during Fiscal Year 1967 as requests are received. Supplemental allocations are possible because Montana has a hold-over balance from previous years amounting to approximately \$1 million. Any requests for inclusion in this year's program should be made immediately.

It appears that the Fiscal Year 1968 Airport Development Program could be three or four times greater than 1967 due to the impact made by air carriers utilizing jet aircraft at airports which are not now capable of handling the larger planes.

FOR SALE: One 520 Aero Commander, one 55 Apache and one B Bonanza. All fully equipped—Price right. Check for details by contacting: Byron Bayers, Twin Bridges.

FAA PERSONNEL TRANSFERS

LOREN FOOT TO MINNEAPOLIS



Loren Foot

Loren Foot, Chief of Great Falls RAPCON and Area Coordinator has been promoted to the FAA's Area Office in Minneapolis effective the latter part of January.

Loren, a Montana native, has been with the Federal Aviation Agency over 20 years. Serving with the CAA/FAA in several positions including Chief of the Anchorage, Alaska Tower and Chief Controller for the Great Falls Tower at International Airport. Loren was appointed Chief of RAPCON at Malmstrom AFB in 1962.

Loren has been the FAA Coordinator and a classroom instructor on all four of the Flight Instructor Refresher Courses sponsored by the Montana Aeronautics Commission. The staff of MAC, as will all Montana Aviation, will miss Loren Foot—he has given a great deal to all phases of flying in our State. We do offer our Congratulations to Loren and wish him and his wife, Lucy the very, very best in their new home.

R. JOSEPHSON TO DISTRICT AIRPORT ENGINEER'S OFFICE

Mr. Russell D. Josephson, recently joined the staff of the Federal Aviation Agency's District Airport Office in Helena. Russ replaced David Dystad as an Airport Engineer when Dave was transferred to the Area Office.

Russ is a native of North Dakota, attended the University before serving three years in the United States Army. Helena is Russ's first assignment with the FAA since joining the

Agency in November of 1966. Prior to that time he was employed by the Bureau of Reclamation and was stationed in Great Falls and at Yellowstone Dam.

Russ is unmarried—enjoys hunting, fishing and photography and is an associate member of the American Society of Civil Engineers.



Russell Josephson

CONGRATULATIONS



CERTIFICATES ISSUED RECENTLY TO MONTANA FLYERS STUDENTS

Dutton, Steven J.—Sand Springs
Robinson, Terry K.—Worden
Cook, Jon R.—Lewistown
Walikonis, James L.—Reserve
Denson, Alexander—Broadus
Barber, Peter L.—Denton
Payne, Bill—Billings
Keim, Vern R.—Billings
Hedrick, James R.—Ryegate
Kuehn, Curtis C.—Columbus
Woltermann, Ronald L.—Columbus
Dornan III, John P.—Glasgow
O'Brien, Walter J.—Glasgow
Jansma, Alvina I.—Billings
Haskell, Thales A.—Lovell, Wyo.
Sullivan, Marshall F.—Broadus
Etzel, Joseph A.—Poplar
Martens, Robert S.—Anaconda
Azinger, Leo J.—Anaconda
Keane, James K.—Butte
McCafferty, John R.—Belt
Salois, Larry J.—Cut Bank
Stanisich, Stephen N.—Butte
Parker, John S.—Great Falls

Castren, Harold A.—Helena
Gaash, Peter A.—Dillon
Kistler, Frederick H.—Dillon
Heidlebaugh, Cecil P.—Loma
Maynard, Edward A.—Bozeman
Nelson, Eric A.—Anaconda
Williams, Muri I.—Belgrade
Hollandsworth, James G.—Bozeman
Funk, David W.—Falls Church, Va.
Hensley, Robert L.—Townsend
Woessner, Grover E.—Kalispell
McAdams, Richard O.—Fort Shaw
Hurst, Howard A.—Kalispell
McDowell, Arlene V.—Chester
Brobst, Jerry E.—Havre
Feltstet, Donald E.—Frenchtown
Ferguson, James A.—Missoula
Figg, James R.—Missoula
McCurley, Ted Lee—Libby
Urbach, Keith J.—Missoula
Wigger, Sherry E.—Carter
Swenson, Gerald L.—Cut Bank
Hoffman, Georgia R.—Cut Bank
Hjartarson, Raymond L.—Cut Bank
Duff, Thomas D.—Great Falls
Hansen, Lee R.—Sidney
Hughes, Lawrence M.—Deer Lodge
Larsen, Donald D.—Plentywood
Williamson, Martin E.—Lloyd
Martin, Jack N.—Missoula
Norby, Myron D.—Fairview
Schout, Dale R.—Glasgow
Taylor, Douglas L.—Bozeman
Johnson, Edward A.—Lewistown
McCollum, Robert N.—Butte
Knudsen, Joseph E.—Kalispell
Hitch, Marian J.—Malta
Long, Howard E.—Missoula
Stuftt, David F.—Cut Bank
Jussila, Ray J.—Butte
Zimmerman, Bill B.—Poplar
Kahla, Chester R.—Helena
Daniels, Charles W.—Scobey
Berg, Gerald E.—Belgrade
Shockley, Richard H.—Great Falls
Schaaf, Jay A.—Woodland Hills, Calif.

PRIVATEES

Grosswiler, James A.—Kalispell
Cole, Larry E.—Gillette, Wyo.
Tidyman, James A.—Billings
Strong, Gerald E.—Lewistown
Castberg, James P.—Powell, Wyo.
Scott, Thomas W.—Dayton, Wyo.
Beardsley, Wayne I.—Glasgow
Emett, Daniel F.—Butte
Mulder, Norman—Manhattan
Veseth, Robert A.—Malta
Knight, Kenneth K.—Great Falls
Little, Bruce W.—Great Falls
McAdams, Richard O.—Fort Shaw
Lancaster, John W.—South Whitley, Indiana
Ries, Ronald E.—Missoula
Stover, Charles P.—Great Falls

Braig, Jacob J.—Great Falls
Bates, William J.—Hamilton
Torgerson, Ronald L.—Ethridge
Turner, Judith G.—Kremlin

ADVANCED AND SPECIALIZED COMMERCIAL

Kramer, Brother Marion—Ashland
Argyle, Lloyd E.—Kingman, Kan.
Byrne, James J.—Pittsburg, Pa.
Baker, Gerald L.—Seattle, Wash.
Glenna, Howard D.—Minneapolis,
Minn.
Robinson, John W.—Missoula
Stevens, Thomas E.—Two Dot
Kerbaugh, Laverne J.—Williston,
N.D.
Terpstra, James E.—Bozeman

INSTRUMENT

Baker, Gerald L.—Seattle, Wash.
Glenna, Howard D.—Minneapolis,
Minn.
Stevens, Thomas E.—Two Dot
Solwold, Donald B.—Great Falls
Taylor, Jeron—Glendive

MULTI ENGINE

Knutson, George R.—Billings
Scott, Dan Sandall—Ranchester,
Wyo.
Osen, Tommy C.—Billings
Glenna, Howard D.—Minneapolis,
Minn.

FLIGHT INSTRUCTOR

Rampton, David B.—Layton, Utah
Culver, Robert S.—Billings
Glenna, Howard D.—Minneapolis,
Minn.
Taylor, Jeron—Glendive
Fairless, Mark W., Sr.—Great Falls

FLIGHT INSTRUCTOR INSTRUMENT

Culver, Robert S.—Billings
Magill, Pearl J.—Glasgow
Glenna, Howard D.—Minneapolis,
Minn.
Taylor, Jeron—Glendive

GROUND INSTRUCTOR AND GROUND INSTRUCTOR INSTRUMENT

Wright, Kenneth D.—Atlanta, Ga.
Argyle, Lloyd E.—Billings
Parten, Hayes A.—Billings
Jacobson, John S.—West Pittston,
Pa.
Byre, James J.—Pittsburgh, Pa.

ROTOCRAFT/HELICOPTER

Hammond, Albin C.—Missoula

POWER PLANT ADDED TO AIRFRAME MECHANIC

Micknak, Donald—Missoula

VICTOR HIGH SCHOOL HOLDS CLASS IN THE BIG SKY

The second flying classroom of the 1966-67 school year was conducted at Victor High School on December 19. Thirteen students of Mr. Cliff Trexler's earth science class participated in the project.

Students were flown over the Bitterroot Valley on a preselected route. This route was laid out so the students could observe geological formations, conservation and land uses and other earth science aspects that had been studied in class.

Mr. Trexler worked closely with Hamilton Aviation in planning for the flying classroom. Marginal weather between Hamilton and Helena prevented the Montana Aeronautics Commission from furnishing at least one aircraft for the flight, as is normally done. Two high wing aircraft, flown by Craig Cook and John Burton, flew three lifts to get all of the students into the air.

The flying classroom is sponsored jointly by the Department of Public Instruction and the Montana Aeronautics Commission. Their goal is to encourage the use of the airplane as a teaching tool. Every school that has been able to participate in a flying classroom has expressed to us the value of such a teaching device, the airplane. Not only is it a unique experience, but it does so much to reinforce those subject areas that are taught and discussed in the classroom.

We in education and aviation are very proud of the Montana Flying Classroom program. As Cliff Trexler said at the conclusion of Victor's program, "A most successful undertaking and a program that I would recommend participation in by any school."

by Ron Adams,
Aviation Education
Supervisor

Chinchillas are considered as excellent space research animals. Their oversized inner ears, resembling man's are very accessible for surgical examination involving motion sickness, weightlessness, and vibration studies.

Did You Know That . . . When international air mail service began in 1919, the total air mail carried for the first year by all the airlines was less than the average mail load aboard just one transatlantic flight today.

COMMITTEE FORMED TO CURB BIRD HAZARD

Brian J. Vincent, of the Federal Aviation Agency, will be Chairman of the Inter-Agency Bird Hazard Committee to exchange and consolidate data in an effort to develop methods for reducing the danger of collisions between birds and airplanes. The agencies are: Department of Interior; U.S. Navy; Department of Health, Education and Welfare; Civil Aeronautics Board; National Aeronautics and Space Administration; U.S. Army and the U.S. Air Force.

Since 1961, the F.A.A. has spent more than \$500,000 for research on bird habitats, migration, and preventive and corrective measures to reduce bird strike hazards. Damage to aircraft structures and engines caused by bird strikes costs millions of dollars each year to the U.S.

Bird strikes occur most frequently during spring and fall bird migrations. Since 1961, there have been an average of 300 strikes on airliners reported each year to FAA by Air Transport Association. Of the estimated 800 in-flight bird strikes experienced each year in the United States by all types of aircraft, approximately 18 per cent result in substantial damage to engines, wings and windshields. Sixty-nine per cent of the strikes occurred as high as 14,000 feet.

MIGRATORY BIRDS AND THEIR PATTERNS.

Migratory birds, particularly waterfowl, are a serious hazard to aircraft due to their size and weight. In recognition of this potential hazard, Federal Aviation Agency Air Traffic Control and Flight Service Station facilities issue advisory information on bird activities, when they are reported or when they have knowledge of such activities. Information given to pilots includes the position, and if known, species or size of birds, their course and altitude.

Federal Aviation Agency Air Traffic Control and Flight Service Station facilities coordinate with airport management for either appropriate alerting action by a Notice to Airmen when flocks of birds are noted to remain in the airport vicinity or for possible closing by a Notice to Airmen when flocks roost on runways.

The FAA Airman's Information Manual carries a chapter on bird hazards. This chapter deals with the migratory patterns of certain bird spe-

cies and give the locations and dates of the spring and fall migratory periods.

Generally speaking the heaviest spring migration period is from March through April and the heaviest fall migration period from October through November.

In the spring, swans migrate over Chesapeake Bay, the lower Susquehanna River, then overland to Lake Erie through Michigan, Wisconsin, North Dakota, Manitoba and Saskatchewan to the Canadian Arctic. Some Birds wintering in Great Salt Lake migrate northwest to the Pacific Coast, then up the coast to Alaska, others migrate northeast through Montana, Alberta and Saskatchewan to reach the breeding grounds. The fall flights are made over approximately the same routes.

Geese are considered the greatest hazard to aircraft because of their abundance, large size, occurrence in large flocks, relatively slow flight and high altitude of flight. Of the 400,000 to 500,000 Canada Geese that migrate between Hudson and James Bays and the Mississippi Valley, over 100,000 pass through Horicon Marsh in Wisconsin.

ACTION.

Municipal attention should be taken to fill, level, and clear airports and adjacent land which create bird refuges and increase bird hazards by providing feeding, bathing, loafing, and nesting places. Birds are attracted to: garbage dumps, food and fish processing wastes, feed pens and piggeries, ponds, sloughes, swamps, man-made lakes and reflecting ponds, sewage lagoons and outfalls, seed and fruit producing plants and trees, tall grasses, reeds, and shrubbery.

To establish research and test programs to improve present aircraft and engine airworthiness standards, it is essential that the FAA have adequate information on what bird strikes are costing the aviation public. All segments of civil and military aviation are urged to furnish the FAA with all bird strike information requested on FAA Form 3830 and to place special emphasis on completing the damage and cost items. Where available, photographs should also be submitted. The FAA Form 3830 is available at most FAA facilities.

About 90 per cent of the free world's jet airliners were built by U.S. aircraft manufacturers.

A CASE IN POINT

**By Charles A. Smith,
Commission Attorney**

"AIRPLANE CRASH—DEGREE OF CARE REQUIRED OF PILOT"

In this case, the plaintiff, husband and wife, sued the estate of a deceased pilot to recover damages for personal injuries sustained by the plaintiff wife and to recover the expenses incurred by the plaintiff husband because of the injury to his wife, and for loss of her society and services.

The pilot, a brother of the plaintiff's wife, was the owner of a Stinson 4-passenger airplane, and held a private pilot's license which permitted him to operate the plane. On one occasion, the pilot invited his sister to take a flight in the plane but because of unfavorable weather conditions they returned immediately to the airport after taking off. Thereafter, he again invited his sister for another flight in the plane and flew to a nearby city and back. Prior to these two flights the plaintiff wife had never flown in a private plane and had ridden in a commercial plane on only one occasion. Several days later, the pilot again invited his sister to take a trip in the plane. This time they flew to a nearby city and landed at the city airport. In the early afternoon, they boarded the plane preparatory to the return flight home. The plane took off in an easterly direction on an East/West grass runway, but failed to gain sufficient altitude to clear a row of trees along the highway approximately 1,000 feet beyond the east end of the field. The plane struck the trees which were about 25 feet high, and crashed, killing the pilot and severely injuring his sister.

The plaintiffs' complaint alleged that the pilot, in attempting to take off from the airport, operated his plane in a negligent and careless manner in several specified respects. There was no specific allegation which made any mention of the use of flaps, but the third ground of negligence alleged was: "That he failed to so operate the airplane so as to gain sufficient altitude to clear trees in his path."

During the course of the trial, evidence was introduced which showed that the pilot made improper use of the flaps during takeoff. Defendant's counsel objected on the ground that the complaint did not allege any im-

proper or negligent use of the flaps. The trial court overruled these objections, being of the opinion that the afore quoted third ground of negligence stated in the complaint, that of failing to operate the plane so as to gain sufficient altitude to clear the trees, was broad enough to include negligent or improper use of the flaps. The defendant appealed from this ruling.

The testimony also disclosed that the position of the flaps of the plane was controlled by a lever situated between the pilot and the passenger occupying the front seat of the plane. When the flaps were in a horizontal position, this control lever was pushed forward almost horizontal with the floor of the plane. In order for the pilot to lower the flaps from the horizontal position it was necessary for him to reach down and take hold of the lever and press a spring button on the same and pull the lever back and up. There were two notched positions into which the lever could be pulled. For the "half flaps" position, the lever was pulled up so that it formed an angle of about 45° with the floor, and for the "full flaps" position (being that of having the flaps lowered to the lowest possible position), the lever was pulled into the last notch so as to be practically perpendicular with the floor.

The evidence further showed that in taking off a plane gains altitude chiefly from speed, although the tilting down of the flaps if the same speed could otherwise be maintained would also aid in obtaining altitude. However, having the flaps at "full flaps" position acts as a brake and reduces speed and this position of the flaps is recommended for use only in landing a plane when the objective is to reduce speed, and never in taking off the ground where speed is all-important in gaining altitude.

The appellate court found that there was sufficient testimony to establish that the flaps on the wrecked plane were in the "full flaps" position at the time of the accident. Both of the pilot's sons were licensed pilots and both testified that they had carefully instructed their father on the proper use of the flaps and the proper position of same when taking off. In view of the foregoing testimony and evidence, the appellate court ruled that the pilot, when he used full flaps in taking off just prior to the crash, fail-

ed to observe the instructions which his two sons had so carefully given him and amply supported the finding of the jury that the pilot did fail to "exercise ordinary care not to increase the danger assumed by the plaintiff upon entering his airplane and failed to exercise ordinary care with respect to the manner in which he used the flaps in the airplane."

Accordingly, the judgment against the defendant in the trial court was affirmed.

STILL LEARNING TO FLY

"Has it occurred to you that you'll never stop learning to fly until you stop flying?"

"New equipment comes out. A few things are different. You've really got to learn how to use it, start it, fly it, and get the feel of it. Gauges likely will be relocated, so you'll have to train yourself to look for them in a new spot.

"New airways are established and old landmarks disappear. You have to keep yourself familiar with new routes, landmarks, and layouts of runways and exits.

"New regulations appear and usually apply to you. You've got to keep up on these regs, or you'll learn about them the hard way.

"A good flier is a constant student of flying. He is always learning from his own experiences, from various kinds of instruction, and from the experiences of others.

"His cargo can change as the years pass by—and the requirements for handling it change, too. For example, only a few years ago Army Aviators hauled very few passengers. Now, they haul up to 32 troops—and new sets of hazards and safeguards must be handled.

"So, good flying is a continuous process of learning. When an aviator stops learning to fly, he is apt to stop living!

"Trouble is, some don't realize when we're going to school in this flying business. Our classroom isn't like the schoolrooms of our childhood. It is usually our aircraft, or it could be the ready room, or a meeting room. It may be something you read in the paper, the Digest, or on the bulletin board. It may be the printed instructions on the side of a Mohawk. It might be right now!

"A good many of us took dancing lessons when we were kids. But dance music and dance steps change. It's pretty hard to waltz to rock-and-roll. If you haven't kept up your dancing, you're in trouble.

"Same thing's true of flying. The music has changed. So has the dance floor! We go faster, further, and we have less time to 'pick up the beat' if you get out of step while flying.

"We each learned to fly one way or another. But fliers today simply can't get along with yesterday's method. They have to know quite a bit about their aircraft. FAA regulations and the laws of nature. They have to understand records and manifests, keep logs, and sometimes handle and account for moneys. They review accidents and try to figure how they would cope with the same problems.

"Don't get the mistaken idea that you are your own teacher in this business of flying.

"Every time you had to explain a mistake, you likely learned something. Every time you had a real near-miss, you should have learned something.

"In a sense, flying is like soldiering. You never stop learning and training for the big showdown. Equipment and tactics may change, but training goes on, adapted to the times.

"Training is up to you. A great deal of literature is available to add to your store of flying savvy. Most read the literature carefully, seeking all possible knowledge to improve themselves. A few may stick the material in the nearest waste basket, certain that you can't teach an old dog new tricks.

"No one can make you learn; you can only be offered the opportunity to learn. Some of you will grab every change to learn, knowing that someday it might help save a life. Others will turn aside and learn little along the way. The type of pilot you are is directly related to your propensity to learn. We can offer pilots an opportunity to learn. This is up to them. But one thing is sure—when you are too old to learn, you are too old to fly."

(Reprint from the United States Army Aviation Digest, adapted from a safety lecture by Donald S. Buck, Director of Safety, Headquarters, U.S. Continental Army Command, Fort Monroe, Va.)

NEW INSTRUMENT FLIGHT PROCEDURES HANDBOOK

A new handbook containing standards to be used in setting up or revising the instrument flight procedures used by pilots landing at all U.S. civilian or military airports has been published by the Federal Aviation Agency.

The new procedures are applicable throughout the world wherever FAA or the U.S. Armed Forces exercise jurisdiction over flight procedures in terminal (airport) areas.

Taking advantages of recent technological advances, the new handbook will provide for more efficient use of both groundbased and airborne navigation equipment to meet the demands of increasing traffic volume. In some instances, airports will be able to make use of navigation aids which previously could not have been used.

Instrument procedures are developed and approved by the FAA in coordination with city, state and military aviation authorities and aviation industry and pilot groups. Such procedures improve service to the public through added instrument approach capability and lowered weather limits for landings at more airports.

Special instructions for setting up and using the new procedures will be distributed to U.S. civilian and military facilities throughout the world.

The FAA handbook, entitled "United States Standards for Terminal Instrument Procedures" can be obtained free from the Federal Aviation Agency, Printing Branch, HQ-438, Washington, D.C., 20553.

In 1965 Air Force air traffic controllers were credited with "saving" 139 aircraft when in-flight emergencies arose that might have resulted in loss of aircraft and injuries or death for the 473 aboard. Total value of the aircraft involved was \$153 million.

Boeing estimated exporting about \$250 million worth of commercial jets in 1966—up from \$235 million in 1965—to bring the dollar value of the 707s, 720Bs and 727s delivered to overseas carriers to nearly \$1,200 million.

FOR SALE: 1959 Tri-Pacer 150. 350 hrs. STOH. Primary Panel—VHT/3 Super Homer—Very Clean—Always hangared—must sell. Price: \$3,600. Contact: N. W. Coleman, 1124 Main, Lewistown. Phone: evenings—538-3042.

MONTANA AVIONICS



Hal Franks at equipment testing table.

Mr. Hal Franks has opened a new Certified Electronic Repair Station in Helena. The station is located on the Helena airport and is housed in the facilities of the Yuhaz Skyport.

Montana Avionics is the first sta-

tion in the State to be certified and equipped for instrument tests, specializing in altimeters. In addition to static testing, Hal will carry a full NARCO line and all aircraft electronic equipment.

STATISTICS

Will your first accident be your last day alive?

61/37
65/22
78/18

	Accident Total	Fatalities
1964 Total	61	37
1965 Total	65	22
1966 Total	78	18

FOR SALE: 1949 Piper Clipper—Lyc. 108—660 hrs. SMOH. Primary panel—VHF-w/OMNI—Fresh annual. Price: \$1500.00. Contact: Toole County Flying Club, 942 N. Marias, Shelby. Phone 434-2207.

FOR SALE: 1959 Bellanca 230-1050 Hr. TT-100 Hr. STOH-Fresh annual-Fabric Top Green-Rotating Beacon-DG-Horizon-Alcor-Carb. Temp-Outside air-MK I omingator-New tires, etc. Price: \$6,995.00-Firm. Contact: G. K. Gregoire, Box 1585,

FOR SALE: Cessna 172--1956--1500 TT--300 MOH. Primary Panel--Narco Superhomer--Very Clean. Contact: Jim Hickman, Raven Ranger Station, Star Route, Libby, Bus. Phone: 293-6112, or resident Phone: 293-4006.

FOR SALE: Cessna 120—615 since major—VHT—3 Radios—2800 TT—Full elec.—Full panel—Nav. & Landing lights. Price: \$1895. CASH. Contact: Warren Thacker, 744 Terry Ave. Billings. Phone: 252-4215 after 3:00 P.M.

FOR SALE: 1966 Cessna 180. Cost New: \$18,176. Wanting to reduce inventory. Will sacrifice for \$15,000. Contact: Don Cazier, Townsend. Phone: 226-3313.

PILOTS: DO YOU HAVE THIS WEATHER LOG?

The log, consisting of a "Key to Aviation Weather" page and 50 detachable sheets, was devised for your convenience. You may copy weather reports while checking the forecast by telephone and use for weather broadcast comparison, enroute. Request Copies: Pilots Weather Log—Montana Aeronautics Commission—P. O. Box 1698, Helena 59601.

KEY TO AVIATION WEATHER REPORTS.....

[illegible]

MEMBER

NATIONAL ASSOCIATION OF STATE AVIATION OFFICIALS

PURPOSE:—"To foster aviation as an industry, as a mode of transportation for persons and property and as an arm of the national defense to join with the Federal Government and other groups in **research, development, and advancement of aviation**; to develop uniform laws and regulations; and to otherwise encourage co-operation and mutual aid among the several states."

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